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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,844	02/09/2001	Sawao Iwatani	21.1993	5417

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
VU, THONG H	

ART UNIT	PAPER NUMBER
2142	3

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/779,844	Applicant(s) IWATANI, SAWAO	
	Examiner Thong H Vu	Art Unit 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *9-14 and 17-19* is/are allowed.

6)☒ Claim(s) *1-8,15,16 and 20-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 February 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 1-26 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-8,15,16,20-26 are rejected under 35 U.S.C. § 102(e) as being anticipated by Medin, Jr. [Medin 6,370,571 B1].

3. As per claim 20, Medin discloses a method of a storage area network system, comprising:

integrating and controlling the storage area network by an integrated management mechanism managing access relationships between host computers of the storage area network and storage devices of the storage area network [Medin, a network management server connected to multiple regional data centers, col 2 lines 17-53; central server, col 10 lines 7-15; RAID, col 6 lines 1-10; Objective systems Integrator software, col 8 lines 15-25, col 10 lines 25-31].

4. As per claim 21, Medin discloses establishing access paths between the host computers and the storage devices [Medin, connection between regional server and RAID levels, col 5 line 60-col 6 line 10], said access paths being established and

controlled by the integrated management mechanism [Medin, Objective systems Integrator software, col 8 lines 15-25, col 10 lines 25-31].

5. As per claim 22, Medin discloses controlling by the integrated management mechanism access to regions of the storage devices by the host computers [Medin, a network management server connected to multiple regional data centers, col 2 lines 17-53].

6. As per claim 23, Medin discloses establishing by the integrated management mechanism storage affinity based on the access paths [Medin, multicast in the network to be customized by region, col 12 lines 64-col 13 lines 6].

7. As per claim 24, Medin discloses establishing zoning for switches interconnecting the host computers and the storage devices of the storage area network [Medin, regional server or router, col 5 lines 40-67].

8. As per claim 25, Medin discloses establishing settings in storage management mechanisms of respective storage devices [Medin, configured disk array, col 6 lines 1-10].

9. As per claim 26, Medin discloses the integrated management mechanism integrates related, reported problems into a single problem report [Medin, report fault, col 2 lines 54-67].

10. As per claim 4, Medin discloses a Host computers in a storage area network system including storage devices and switches interconnecting the storage devices and the host computers, each of said host computers comprising:

an integrated management mechanism integrating and managing the storage area network system, and establishing access information for the storage devices based on access management information transmitted to the storage devices from the integrated management mechanism [Medin, a network management server connected to multiple regional data centers, col 2 lines 17-53; central server, col 10 lines 7-15; RAID, col 6 lines 1-10; using objective systems Integrator software, col 8 lines 15-25, col 10 lines 25-31].

11. As per claim 5, Medin discloses Switches in a storage area network system including storage devices, host computers, and an integrated management mechanism integrating and managing the storage area network system, each of said switches comprising:

a region-setting mechanism (i.e.: a regional server) carrying out the region settings based on region information transmitted by the integrated management mechanisms, said switches interconnecting the storage devices and the host computers

[Medin, a network management server connected to multiple regional data centers, col 2 lines 17-53; central server, col 10 lines 7-15; RAID, col 6 lines 1-10; using objective systems Integrator software, col 8 lines 15-25, col 10 lines 25-31; switches, routers and regional servers, col 5 lines 40-67].

12. As per claim 6, Medin discloses a Storage devices in a storage area network system including host computers and switches, and an integrated management mechanism integrating and managing the storage area network system, each of said storage devices comprising:

a storage management mechanism establishing conditions of access restrictions for the storage device based on access restriction information (i.e.: private network) transmitted by the integrated management mechanism, said switches interconnecting the host computers and the storage devices [Medin, a network management server connected to multiple regional data centers, col 2 lines 17-53; central server, col 10 lines 7-15; RAID, col 6 lines 1-10; using objective systems Integrator software, col 8 lines 15-25, col 10 lines 25-31; private network, col 5 lines 8-12].

13. As per claim 7, Medin discloses an apparatus provided in a storage area network including storage devices including storage management mechanisms, host computers including storage area network management mechanisms, and switches interconnecting the storage devices and the host computers, said apparatus comprising:

integrated management mechanisms integrating and managing the storage area network system, transmitting access management information to the storage devices and to the storage area network management mechanisms of the host computers, transmitting region information to a switch region-setting mechanism, and transmitting access restriction information concerning the host computers to the storage management mechanisms of the storage devices [Medin, a network management server connected to multiple regional data centers, col 2 lines 17-53; central server, col 10 lines 7-15; RAID, col 6 lines 1-10; using objective systems Integrator software, col 8 lines 15-25, col 10 lines 25-31; private network, col 5 lines 8-12].

14. As per claim 1, Medin discloses a storage area network management system comprising:

host computers, each comprising a storage area network management mechanism [Medin, a network management server connected to multiple regional data centers, col 2 lines 17-53; central server, col 10 lines 7-15; RAID, col 6 lines 1-10];

storage devices, each comprising a storage management mechanism [Medin, a network management server connected to multiple regional data centers, col 2 lines 17-53; RAID, col 6 lines 1-10];

switches coupled to the host computers and to the storage devices, said switches interconnecting the host computers and the storage devices, each of the switches comprising a region-setting mechanism [Medin, switches, routers and regional servers, col 5 lines 40-67]; and

an integrated management mechanism integrating and controlling the storage area network, said integrated management mechanism including access route information of the host computers and the storage devices and, based on said access route information (i.e.: router), transmitting access management information to the storage devices and the storage area network management mechanisms of the host computers, transmitting region information to the region-setting mechanisms of the switches, and transmitting access limit information concerning the host computers to the storage management mechanisms of the storage devices [Medin, Objective systems Integrator software, col 8 lines 15-25, col 10 lines 25-31; switches, routers and regional servers, col 5 lines 40-67].

15. As per claim 2, Medin discloses the integrated management mechanism obtaining a configuration status of the storage area network from each of the storage devices, the switches, and the host computers and stores said configuration status as storage area network configuration settings information, and wherein at regular intervals, or when instructed by a system administrator, the integrated management mechanism gathers current configuration status of the storage area network, compares the current configuration status to the configuration settings information that was collected, and detects discrepancies based upon the comparison [Medin, status of the region, col 8 lines 15-25].

16. As per claim 3, Medin discloses the integrated management mechanism obtaining information on the access relationships from the host computer storage area network management mechanism, switches and/or the storage devices, and checking the compatibility of the access paths and, if the integrated management mechanism finds any access paths which are not set up correctly, sending out a notice about problems in a section corresponding thereto [Medin report faults, col 2 lines 54-67].

17. As per claim 15, Medin discloses a storage area network system comprising:

host computers; storage devices, each comprising a storage management mechanism; switches interconnecting the host computers and the storage devices [Medin, a network management server connected to multiple regional data centers, col 2 lines 17-53; switches, routers and regional servers, col 5 lines 40-67; RAID, col 6 lines 1-10]; and

an integrated management mechanism integrating and controlling the storage area network and comprising access path information of the host computers and storage devices, wherein using said access path information, the integrated management mechanism transmitting access management information to the storage devices and to the storage area network management mechanism, transmitting region information to switch region-setting mechanisms [Medin, Objective systems Integrator software, col 8 lines 15-25, col 10 lines 25-31; switches, routers and regional servers, col 5 lines 40-67], and transmitting access restriction information concerning the host computers to the storage management mechanisms of the storage devices I.e.:

communicates to a private network), wherein when the storage area network management system is started up and the access path information has not been set up the integrated management mechanism first sets up the region-setting mechanisms of the switches so that no access is permitted (i.e.: establish connection at a first time), and, after that, the integrated management mechanism sets up regions on the regions setting mechanisms of the switches [Medin, acess to remote LAN or private network, col 5 lines 8-12; col 11 lines 20-34; the private network allows for multicasting in the network to be customized by region, col 12 line 64-col 13 line 6].

18. As per claim 8, Medin discloses a computer-readable medium including a program which program, when executed by a computer, causes the computer to execute the processes comprising:

integrating and controlling a storage area network including host computers and storage devices connected by switches through **fiber channels** [Medin FDDI ring, fiber coax, col 4 lines 1-10,32-49], said processes further comprising:

transmitting access management information to the storage devices and storage area network management mechanisms of the host computers based on the access path information of the storage devices and the host computers, transmitting region information to region setting mechanisms of the switches, transmitting access restriction information about the host computers to storage management mechanisms of the storage devices, and managing access relationships between the hosts and storage devices [Medin, a network management server connected to multiple regional data

centers, col 2 lines 17-53; central server, col 10 lines 7-15; RAID, col 6 lines 1-10; using objective systems Integrator software, col 8 lines 15-25, col 10 lines 25-31; private network, col 5 lines 8-12].

Allowable Subject Matter

19. Claims 9-14 and 17-19 are allowable.

None of the prior of record discloses (claim 9) an integrated management device integrating and managing said storage area network, said integrated management device comprising access path information of the host computers and storage devices, said integrated management device transmitting access management information to the storage area network management mechanism of the host computers and to the storage devices, region information to the region setting mechanisms of the switches, and access restriction information about the host computer to the storage management mechanisms of the storage devices, wherein the integrated management mechanism detecting whether fiber channel adapters mounted on the storage devices and the host computers, the host bus adapters mounted on the host computers, or the switches in said storage area network management system are replaced, obtaining settings information following the replacement from the storage area network management mechanism of the host computers, the switch region-setting mechanism, or the storage device storage management mechanism, and reconfiguring the access relationships to be equivalent to the access relationships prior to the replacement.

(claim 17) an integrated management mechanism integrating and controlling the storage area network and comprising access path information of the host computers and storage devices and, using said access path information, the integrated management mechanism sends out access management information to the storage devices and the storage area network management mechanisms, region information to the switch region-setting mechanisms, and access restriction information concerning the above host computers to the storage management mechanisms of the storage devices, wherein when a problem occurs in the storage area network system the integrated management mechanism receives problem information and, for a specified period of time, waits to see if there are other problem reports by checking problem reports received during the specified period and investigating relationship between the received problem reports and the problem report received first, and if the integrated management mechanism determines that the received problem reports and the problem report first received are related, the integrated management mechanism transmits a single report concerning one affected area according to a problem report method definition set up in advance in the integrated management mechanism.

20. Claim 10-14 and 18-19 depend on claims 9 and 17 respectively and are considered allowable on the same basis as the independent claim as well as for the further limitations set forth.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thong Vu, whose telephone number is (703)-305-4643.
The examiner can normally be reached on Monday-Thursday from 8:00AM- 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Jack Harvey*, can be reached at (703) 305-9705.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9700.

Any response to this action should be mailed to: Commissioner of Patent and Trademarks, Washington, D.C. 20231 or faxed to :

After Final	(703) 746-7238
Official:	(703) 746-7239
Non-Official	(703) 746-7240

Hand-delivered responses should be brought to Crystal Park 11,2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Thong Vu
Patent Examiner
Art Unit 2142